

What is claimed:

1. Isolated nucleic acid having at least 80% nucleic acid sequence identity to:
  - 5 (a) a nucleotide sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4), Figure 6 (SEQ ID NO:6), Figure 10 (SEQ ID NO:10), Figure 12 (SEQ ID NO:12), Figure 14 (SEQ ID NO:14), Figure 16 (SEQ ID NO:16), Figure 19 (SEQ ID NO:19), Figure 21 (SEQ ID NO:21) or Figure 24 (SEQ ID NO:24).
- 10 2. Isolated nucleic acid having at least 80% nucleic acid sequence identity to a nucleotide sequence selected from the group consisting of the nucleotide sequence shown in Figure 1A-B (SEQ ID NO:1), Figure 3 (SEQ ID NO:3), Figure 5 (SEQ ID NO:5), Figure 7 (SEQ ID NO:7), Figure 8 (SEQ ID NO:8), Figure 9 (SEQ ID NO:9), Figure 11 (SEQ ID NO:11), Figure 13A-B (SEQ ID NO:13), Figure 15 (SEQ ID NO:15), Figure 17 (SEQ ID NO:17), Figure 18 (SEQ ID NO:18), Figure 20 (SEQ ID NO:20),
  - 15 Figure 22 (SEQ ID NO:22), Figure 23 (SEQ ID NO:23), Figure 25 (SEQ ID NO:25), Figure 26 (SEQ ID NO:26) and Figure 27 (SEQ ID NO:27).
- 20 3. Isolated nucleic acid having at least 80% nucleic acid sequence identity to a nucleotide sequence selected from the group consisting of the full-length coding sequence of the nucleotide sequence shown in Figure 1A-B (SEQ ID NO:1), Figure 3 (SEQ ID NO:3), Figure 5 (SEQ ID NO:5), Figure 7 (SEQ ID NO:7), Figure 8 (SEQ ID NO:8), Figure 9 (SEQ ID NO:9), Figure 11 (SEQ ID NO:11), Figure 13A-B (SEQ ID NO:13), Figure 15 (SEQ ID NO:15), Figure 17 (SEQ ID NO:17), Figure 18 (SEQ ID NO:18), Figure 20 (SEQ ID NO:20), Figure 22 (SEQ ID NO:22), Figure 23 (SEQ ID NO:23), Figure 25 (SEQ ID NO:25), Figure 26 (SEQ ID NO:26) and Figure 27 (SEQ ID NO:27).
- 25 4. A vector comprising the nucleic acid of Claim 1.
- 5 5. The vector of Claim 5 operably linked to control sequences recognized by a host cell transformed with the vector.
- 30 6. A host cell comprising the vector of Claim 5.
7. The host cell of Claim 7, wherein said cell is a CHO cell, an *E.coli* cell or a yeast cell.
- 35 8. A process for producing a PRO polypeptide comprising culturing the host cell of Claim 7 under conditions suitable for expression of said PRO polypeptide and recovering said PRO polypeptide from the cell culture.
9. An isolated polypeptide having at least 80% amino acid sequence identity to:

(a) an amino acid sequence of the polypeptide shown Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4), Figure 6 (SEQ ID NO:6), Figure 10 (SEQ ID NO:10), Figure 12 (SEQ ID NO:12), Figure 14 (SEQ ID NO:14), Figure 16 (SEQ ID NO:16), Figure 19 (SEQ ID NO:19), Figure 21 (SEQ ID NO:21) or Figure 24 (SEQ ID NO:24).

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~~10~~ ~~12.~~ A chimeric molecule comprising a polypeptide according to Claim 10 fused to a heterologous amino acid sequence.

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~~11~~ ~~13.~~ The chimeric molecule of Claim 12, wherein said heterologous amino acid sequence is an epitope tag sequence or an Fc region of an immunoglobulin.

~~12~~ ~~14.~~

An antibody which specifically binds to a polypeptide according to Claim 10.

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~~13~~ ~~15.~~ The antibody of Claim 14, wherein said antibody is a monoclonal antibody, a humanized antibody or a single-chain antibody.

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~~14~~ ~~16.~~ A composition of matter comprising (a) a polypeptide of Claim 10, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide, in combination with a carrier.

~~15~~ ~~17.~~ The composition of matter of Claim 16, wherein said carrier is a pharmaceutically acceptable carrier.

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~~16~~ ~~18.~~ The composition of matter of Claim 16 comprising a therapeutically effective amount of (a), (b), (c) or (d).

~~17~~ ~~19.~~

An article of manufacture, comprising:

a container;

a label on said container; and

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a composition of matter comprising (a) a polypeptide of Claim 10, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide, contained within said container, wherein label on said container indicates that said composition of matter can be used for treating an immune related disease.

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~~18~~ ~~20.~~ A method of treating a B cell related disorder in a mammal in need thereof comprising administering to said mammal a therapeutically effective amount of (a) a polypeptide of Claim 10, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide.

19 21. The method of Claim 20, wherein the immune related disorder is; systemic lupus erythematosus, X-linked infantile hypogammaglobulinemia, polysaccharide antigen unresponsiveness, selective IgA deficiency, selective IgM deficiency, selective deficiency of IgG subclasses, immunodeficiency with hyper Ig-M, transient hypogammaglobulinemia of infancy, Burkitt's lymphoma, Intermediate lymphoma, follicular lymphoma, typeII hypersensitivity, rheumatoid arthritis, autoimmune mediated hemolytic anemia, myasthenia gravis, hypoadrenocorticism, glomerulonephritis and ankylosing spondylitis.

20 22. A method for determining the presence of a PRO polypeptide in a sample suspected of containing said polypeptide, said method comprising exposing said sample to an anti-PRO52040, anti-PRO71035, anti-PRO52892, anti-PRO52174, anti-PRO71207, anti-PRO71288, anti-PRO71210, anti-PRO71289, anti-PRO52268 or anti-PRO52672 antibody and determining binding of said antibody to a component of said sample.

21 23. A method of diagnosing a B cell related disease in a mammal, said method comprising detecting the level of expression of a gene encoding PRO52040, PRO71035, PRO52892, PRO52174, PRO71207, PRO71288, PRO71210, PRO71289, PRO52268 or PRO52672 polypeptide (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower level of expression of said gene in the test sample as compared to the control sample is indicative of the presence of B cell related disease in the mammal from which the test tissue cells were obtained.

22 24. A method of diagnosing a B cell related disease in a mammal, said method comprising (a) contacting an PRO52040, PRO71035, PRO52892, PRO52174, PRO71207, PRO71288, PRO71210, PRO71289, PRO52268 or PRO52672 antibody with a test sample of tissue cells obtained from said mammal and (b) detecting the formation of a complex between the antibody and the polypeptide in the test sample, wherein formation of said complex is indicative of the presence of an immune related disease in the mammal from which the test tissue cells were obtained.

23 25. A method of identifying a compound that inhibits the activity of PRO52040, PRO71035, PRO52892, PRO52174, PRO71207, PRO71288, PRO71210, PRO71289, PRO52268 or PRO52672 polypeptide, said method comprising contacting cells which normally respond to said polypeptide with (a) said polypeptide and (b) a candidate compound, and determining the lack responsiveness by said cell to (a).

24 26. A method of identifying a compound that inhibits the expression of a gene encoding a PRO52040, PRO71035, PRO52892, PRO52174, PRO71207, PRO71288, PRO71210, PRO71289, PRO52268 or PRO52672 polypeptide, said method comprising contacting cells which normally express said polypeptide with a candidate compound, and determining the lack of expression said gene.

25 27. The method of Claim 26, wherein said candidate compound is an antisense nucleic acid.

26. 28. A method of identifying a compound that mimics the activity of a PRO52040, PRO71035, PRO52892, PRO52174, PRO71207, PRO71288, PRO71210, PRO71289, PRO52268 or PRO52672 polypeptide, said method comprising contacting cells which normally respond to said polypeptide with a candidate compound, and determining the responsiveness by said cell to said candidate compound.

27. 31. A method of stimulating the B cell response in a mammal, said method comprising administering to said mammal an effective amount of a PRO52040, PRO71035, PRO52892, PRO52174, PRO71207, PRO71288, PRO71210, PRO71289, PRO52268 or PRO52672 polypeptide antagonist, wherein said B cell response is stimulated.

28. 32. A method of diagnosing a B-cell mediated immune response in a mammal, said method comprising detecting the level of expression of a gene encoding PRO52040, PRO71035, PRO52892, PRO52174, PRO71207, PRO71288, PRO71210, PRO71289, PRO52268 or PRO52672 polypeptide (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower level of expression of said gene in the test sample as compared to the control sample is indicative of the presence of a B cell mediated immune response in the mammal from which the test tissue cells were obtained.